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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,537	10/06/2003	Noo Li Jeon	UC-P0001	2536

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EXAMINER	
BEISNER, WILLIAM H	

ART UNIT	PAPER NUMBER
1744	

DATE MAILED: 12/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/605,537	JEON ET AL.	
	Examiner	Art Unit	
	William H. Beisner	1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 August 2006 and 26 September 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *17,18,21-28,30 and 43* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *17,18,21-28,30 and 43* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 17, 18, 21-28, 30 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanegasaki et al.(US 2003/0003570).

The reference of Kanegasaki et al. discloses a multi-compartment microfluidic device that includes a substrate (6) coupled with a device (5,7) comprising a first microfluidic region (2A) having a plurality of entry reservoirs (3A, 4A) for accepting or extracting a first volume of fluid. The device also includes a second microfluidic region (2B) having a plurality of entry reservoirs (3B, 4B) for accepting or extracting a second volume of fluid. The device includes a barrier region (1) that couple the first microfluidic region with the second microfluidic region and include microgrooves (13) that fluidically isolate the first region from the second region.

Claim 17 differs by reciting that the first region, second region, the first and second plurality of reservoirs and the barrier region are fabricated within an optically transparent device.

While the reference of Kanegasaki et.al. discloses that substrate (6) is optically transparent (See paragraph [0103]), the reference is silent as to whether structures (5 and 7) of the microfluidic device are optically transparent. The reference of Kanegasaki et al. discloses that substrate (5) and block (7) can be made of glass or plastic materials (See paragraphs [0138]-[0139]). The reference of Kanegasaki et al. also discloses that the device can be integrally formed with the glass substrate (6) (See paragraph [0124]).

In view of this disclosure, it would have been obvious to one of ordinary skill in the art to form the structures of the substrate (5) and block (7) as a unitary device for the known and expected result of providing the required unitary device as suggested by the reference. Note that the use of one-piece construction rather than several parts assembled together to achieve the same unity whole is not a patentable distinction. In re Larson, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965). The use of optically transparent materials including glass or plastic

would have been within the purview of one having ordinary skill in the art for the known and expected result of allowing the contents of the device to be optically monitored.

With respect to claim 18, the reference of Kanegasaki et al. discloses that the first and second regions can be disposed parallel to one another (See Figure 24).

With respect to claims 21 and 22, the reference of Kanegasaki et al. discloses channel dimensions that meet the instant claim language (See paragraphs [0129]-[0130]).

With respect to claims 23-28 and 30, the device of Kanegasaki et al. is structurally capable of supporting a cell as recited in claims 23-28 and 30. Note these claims do not positively recite the cell as part of the claimed device and statements of intended use carry no patentable weight in apparatus-type claims.

With respect to claim 43, assembly of the device as disclosed and suggested by the reference of Kanegasaki et al. meets the assembly steps recited in claim 43.

Response to Arguments

5. With respect to the rejection of Claims 17-38 under 35 U.S.C. 102(b) as being anticipated by Kricka et al.(US 5,744,366) and Claims 17-38 under 35 U.S.C. 102(b) as being anticipated by Kricka et al.(US 5,296375), these rejections have been withdrawn in view of the amendments to the claims and related comments (See pages 7-8 of the response filed 8/19/2006).

6. With respect to the potential rejection of claims 17, 18, 21-28, 30 and 43 over the reference of Kanegasaki et al.(US 2003/0003570), Applicants argue (See page 5 of the response filed 9/26/2006) that the amendments to claim 17 and new claim 43 define over the reference of

Kanegasaki et al. because the reference requires two pieces to form wells (2) while the instant claims form the wells using a single structure.

In response, the Examiner is of the position that the reference of Kanegasaki et al. meets the instant claim language for the reasons set forth in the 35 USC 103 rejection above.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The reference of Spence et al.(US 6,540,895) is cited as prior art that pertains to forming microchannel devices (See column 11, line 1, to column 12, line 15).

The reference of Kirk et al.(US 2002/0168757) is cited as prior art that pertains to forming microchannel devices using "soft lithography".

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Beisner whose telephone number is 571-272-1269. The examiner can normally be reached on Tues. to Fri. and alt. Mon. from 6:15am to 3:45pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys J. Corcoran can be reached on 571-272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

William H. Beisner
Primary Examiner
Art Unit 1744

WHB